



# Private Drinking Water Monitoring Programme Audit Report

<b>County:</b>	Fingal	<b>Date of Audit:</b>	23 <sup>rd</sup> August 2018
<b>Location visited:</b>	Fingal County Council office at Leixlip Water Treatment Plant	<b>Date of issue of Audit Report:</b>	29 <sup>th</sup> November 2018
		<b>Auditors:</b>	Ms. Derval Devaney (EPA) Dr. John Gray (Consultant)
<b>Audit Criteria:</b>	<ul style="list-style-type: none"> <li>• The <i>European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended.</i></li> <li>• The <i>EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Private Water Supplies (ISBN: 978-1-84095-349-7).</i></li> </ul>		

## MAIN FINDINGS

- Fingal County Council’s register of private water supplies was not fully complete and may not capture all private water supplies in its functional area that are required to be monitored for drinking water compliance purposes.
- Fingal County Council had listed just one, out of eight private water supplies it has identified, on the EPA’s EDEN system.
- Only two compliance monitoring results (out of 16 samples required to be taken) were reported to the EPA for 2017 for the eight private water supplies listed on Fingal Co. Co.’s register. However, additional results taken in 2017 (15 samples) were made available during the audit for review.
- Fingal Co. Co. had visited all eight regulated private supplies and had documented the treatment in place for these supplies.

## 1. INTRODUCTION

Under the *European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended.* the Environmental Protection Agency has a supervisory role in relation to the Local Authority’s establishment and implementation of monitoring programmes. This audit was carried out to assess the performance of Fingal County Council in ensuring effective compliance monitoring of private drinking water supplies was undertaken for the provision of clean and wholesome drinking water.

An audit of the 2017 monitoring programmes implemented in County Fingal was carried out at the Fingal County Council Offices located next to the Leixlip Water Treatment Plant on 23<sup>rd</sup> August 2018. Using a questionnaire as a guide<sup>1</sup>, Fingal County Council staff were interviewed to ascertain the principles and methodology for establishing monitoring programmes, sample point selection, sample classification, integrity of data reporting and notification procedures.

The audit observations and recommendations are listed in Section 2 and 4 of this report. The following were in attendance during the audit.

Representing Fingal County Council: (\*indicates that person was also present for the closing meeting)  
Mr. Martin Byrne – Executive Engineer (Building Control), Water Quality Engineer to May 2018\*

<sup>1</sup> The questionnaire was based on those used by the Drinking Water Inspectorate, London, and modified by Dr John Gray for the purpose of this audit.

Mr Stephen Cummins – Executive Engineer between June and August 2018\*

Mr. James Dowling – Executive Engineer from 1 September 2018\*

Representing the Environmental Protection Agency:

Ms. Derval Devaney – Inspector, EPA\*

Dr. John Gray – Consultant\*

## 2. AUDIT OBSERVATIONS

*The audit process is a random sample on a particular day of a facility's operation. Where an observation or recommendation against a particular issue has not been reported, this should not be construed to mean that this issue is fully addressed.*

<b>1.</b>	<b>Compliance Monitoring Programme</b> <ul style="list-style-type: none"><li>a. The 2017 compliance monitoring programme for private water supplies was prepared by the Executive Engineer for Fingal County Council (Co. Co.) and is held in his office. It listed eight private water supplies, their address, estimated water usage and the required number of check samples to be undertaken. The programme specified that two check samples were to be taken annually at all eight premises. It did not specify what audit parameters were to be tested.</li><li>b. The sampling frequency was based on volume, which was provided by the water suppliers to Fingal Co. Co. via a questionnaire Fingal Co. Co. issued to the water suppliers.</li><li>c. Although known to Fingal Co. Co., information regarding population data for each supply, the required number of audit samples and predetermined sample locations was not included in the compliance monitoring programme.</li><li>d. A blank page entitled “Register – Private Water Suppliers” required entries for business name and address; contact name and telephone number; type of business; volume supplied or population; type of water treatment and source of water. While some details required under Regulation 8(3) of the <i>European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended</i> were recorded by Fingal Co. Co. a complete and up-to-date register for private water supplies was not evident.</li><li>e. Fingal Co. Co. determined the eight private water supplies existed by reviewing the supplies listed on its non-domestic database however, it indicated that there may be additional private supplies in the County that are not included on its list of regulated private supplies and therefore are not being monitored for compliance purposes.</li><li>f. The 2017 Drinking Water Returns submitted by Fingal Co. Co. to the EPA listed just one private water supply (rather than the eight which Fingal Co. Co. has identified) with the associated scheme code 0900PRI0001. The results of one check and one audit sample was submitted in EDEN under this scheme code. However, the monitoring stations where the samples were taken showed that the audit sample taken on 04/05/17 and entered into EDEN was taken from a different private water supply. It was evident during the audit that the supply scheme code 0900PRI0001 was indeed sampled twice during 2017 (one check and one audit sample) but the check sample taken on 27/02/18 was not reported via EDEN to the EPA. Therefore, there were no sample results submitted via EDEN for six of the private water supplies on Fingal Co. Co.’s list and there were no scheme codes entered into EDEN for seven of the private water supplies.</li><li>g. All eight private water supplies had been visited by Fingal Co. Co. and the treatment identified and recorded. Photographs and a report of any deficiencies were sent to the scheme owner.</li><li>h. One additional previously unknown B&amp;B property was identified by a sampler. As a result, all inspectors were instructed to notify any future previously unknown private supplies.</li><li>i. Population figures and volumes of water supplied are reviewed every two years. This frequency was deemed appropriate by Fingal Co. Co. since changes are few and small.</li><li>j. Sample collection dates were not pre-determined in the 2017 monitoring programme.</li></ul>
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	<ul style="list-style-type: none"> <li>k. During 2017, Fingal Co. Co. wrote to the private water suppliers instructing them to undertake compliance monitoring (two check samples which would include the three audit parameters nitrate, manganese and sodium) by an ISO 17025 accredited laboratory and to submit the results to the Fingal Co. Co. It had been considered that the term “monitor compliance” did not necessarily mean that Fingal Co. Co. should take the samples. It was not clear why just three audit samples were to be included in the monitoring and if a risk assessment was carried out to determine that these were the only audit parameters that were required to be monitored.</li> <li>l. Fingal Co. Co. also carried out sampling during 2017 to ensure the compliance sampling frequency requirement was met. However, records provided during the audit showed that one private supply was only monitored once and not twice as required during 2017.</li> <li>m. Fingal Co. Co. consider that monitoring requirements should be guided by a risk assessment and should include coliforms as a matter of course and sodium where softeners are installed. However, there was no evidence provided of a risk assessment being carried out. One source has reverse osmosis installed and most of the remainder have UV.</li> </ul>
<b>2.</b>	<p><b>Operational Monitoring Programme</b></p> <ul style="list-style-type: none"> <li>a. Fingal Co. Co. do not undertake operational monitoring of the private water supplies but it does carry out investigative sampling as the need arises.</li> </ul>
<b>3.</b>	<p><b>Monitoring Programmes for Specific Parameters</b></p> <ul style="list-style-type: none"> <li>a. No specific monitoring programmes were in place for pesticides, trihalomethanes, lead or radioactivity. There was no evidence of a risk assessment being carried out to determine that these parameters were not required as part of the audit compliance monitoring requirements.</li> </ul>
<b>4.</b>	<p><b>Sampling Procedures</b></p> <ul style="list-style-type: none"> <li>a. Fingal Co. Co. staff sampled the private water supplies for compliance monitoring during 2017 and sent the samples to the accredited Dublin City Council Central Laboratory for analysis. This was in addition to any sampling the water supplier was instructed to carry out. There was no sampling procedure for Fingal Co. Co. samplers available to inspect during the audit.</li> </ul>
<b>5.</b>	<p><b>Data Handling</b></p> <ul style="list-style-type: none"> <li>a. Some private water suppliers sent the compliance monitoring it was instructed to undertake for 2017 to Fingal Co. Co. Emails and hard copies of the results are retained by Fingal Co. Co. but these were not submitted to the EPA as part of the annual returns via EDEN. Fingal Co. Co. stated it had difficulties uploading this data to EDEN.</li> <li>b. Dublin City Council Central Laboratory upload the results of the compliance samples they analyse on behalf of Fingal Co. Co, for the private water supplies to EDEN, however only two sets of compliance monitoring results were uploaded for 2017.</li> <li>c. Hard copies were examined of analytical data for all samples taken by the private water suppliers, together with Fingal Co. Co. results from their own check and audit sampling analysed by Dublin City Council Central Laboratories for the eight sites identified. All supplies except for one supply was sampled twice in 2017.</li> <li>d. There was limited communication between the various groups involved in monitoring the regulated private water supplies (e.g. water suppliers, Fingal Co. Co. and Dublin City Council Central Laboratories) to ensure a co-ordinated approach to the collection and reporting of results.</li> <li>e. Only one private water supply out of the eight that Fingal Co. Co. has on its private water supplies list is listed in EDEN. A sample taken at another private water supply was entered incorrectly into the single supply listed in EDEN.</li> </ul>
<b>6.</b>	<p><b>Exceedances of Parametric Values</b></p> <ul style="list-style-type: none"> <li>a. There were no exceedances in the 2017 monitoring data for private supplies reported to the EPA via EDEN. However, while 15 samples were taken during 2017, only two rounds of monitoring results out of the 16 sample results required for the eight listed private water supplies were reported to the EPA via EDEN for 2017.</li> </ul>

	<ul style="list-style-type: none"> <li>b. Fingal Co. Co. maintains an in-house record of all sample exceedances, the actions taken in response to those exceedances and the outcome of the actions.</li> <li>c. In the event of an exceedance of, for example, sodium, the scheme owner would be advised directly by Fingal Co. Co. An exceedance of total coliforms would result in Fingal Co. Co. issuing “Do not use” advice after consultation with HSE. Further samples would be taken after remedial action had been completed and the scheme owner advised accordingly. Hard copies of data were examined for an example of the process in 2016.</li> <li>d. The process in place for Fingal Co. Co.’s investigation of exceedances is not documented.</li> </ul>
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### 3. AUDITORS’ COMMENTS

While Fingal County Council had made efforts to identify regulated private water supplies in its functional area and strived to ensure monitoring is being carried out at the required frequency, its private water supplies register and monitoring programme drawn up and implemented by Fingal County Council in 2017 were lacking detail that is required under Regulation 8(3) and Regulation 7(5) respectively of the *European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014), as amended*.

The results of the 2017 compliance monitoring were not reported in full to the EPA and just one of the eight private water supplies was registered on the EPA’s system, EDEN. In addition, it was not clear if a risk assessment was carried out to determine which parameters should and should not be monitored as part of the check and audit sampling.

Finally, while all eight private water supplies identified by Fingal County Council were visited and the treatment identified and recorded, it is of concern to the EPA that there may be other private water supplies in Fingal County Council’s functional area that are not on its register and therefore are not being monitored for compliance to ensure that its water is safe to drink.

### 4. RECOMMENDATIONS

#### Compliance Monitoring Programme

1. Fingal County Council should develop a procedure on how to identify all regulated private supplies within its functional area of responsibility. The procedure should include a process for reviewing the register annually so that any changes to the population figures, supply output volumes, new or reductant private water supplies etc. are identified. This procedure should be put in place and acted upon without delay.
2. Fingal County Council should ensure that all regulated private supplies are included on its register and relevant information pertaining to each supply is recorded for the purposes of the register and the compliance monitoring programme as required by Regulation 8(3) and Regulation 7(5) respectively of the Regulation of the Drinking Water Regulation 2014, as amended. For example, in addition to information that was recorded, the source of the water supply, population, the water supply zone code and number of audit samples should be also documented by Fingal County Council.
3. Fingal County Council should ensure all private water supplies on its register are entered on the EPA’s database, EDEN, and each water supply is given a scheme code as required under the Drinking Water National Monitoring Programme. The results of all check (Group A) and audit (Group B) compliance samples required to be taken should be uploaded to EDEN by 28<sup>th</sup> February each year under the correct private water supply’s scheme code and monitoring station code that the sample relates to.
4. Fingal County Council should define a predetermined narrow window of dates in which to take compliance samples.
5. Fingal County Council should ensure if the water supplier is to undertake compliance sampling, that this sampling is reported to Fingal Co. Co. without delay for assessment and action, if necessary, and in turn all compliance sampling is reported correctly to the EPA via EDEN by 28<sup>th</sup> February each year.

6. Fingal County Council should ensure all private supplies that fall within its remit are monitored for compliance at their required check and audit frequencies. Fingal Co. Co., when completing its risk assessment to identify those parameters requiring analysis, should be mindful of the requirements of the *European Union (Drinking Water) (Amendment) Regulations 2017 (S.I. 464 of 2017)*, and specifically Part C of these regulations in its determination of a derogation from sampling frequencies. It should also have regard to Section 3 Paragraph 2.6 the EPA's Handbook for Private Supplies

#### **Sampling Procedures**

7. Fingal County Council should develop and put in place for its samplers a sampling procedure as a fully controlled document.

#### **Data Handling**

8. If Dublin City Council Laboratory continue to upload compliance monitoring results to EDEN on behalf of Fingal County Council, an agreement between the two parties and a procedure should be put in place to ensure this upload is completed by the 28<sup>th</sup> February each year and meets the EPA's Drinking Water monitoring reporting requirements.

#### **Exceedances of Parametric Values**

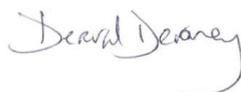
9. Fingal County Council should put in place a procedure for dealing with sample results that exceed the parametric values outlined in the *European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014)*, as amended. The procedure should include actions to be taken to investigate the exceedance and report the exceedance to the HSE, the Water Supplier and any other relevant party.

### **FOLLOW-UP ACTIONS REQUIRED BY FINGAL COUNTY COUNCIL**

This report has been reviewed and approved by Emer Cooney, Inspector, EPA.

Fingal County Council is recommended to put such measures in place as are necessary to implement the recommendations listed in this report. The actions by Fingal County Council to address the recommendations taken will be verified by the Agency during any future audits.

**Report prepared by:**



**Date:**

29<sup>th</sup> November 2018

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EPA Inspector

John Gray, Consultant